

## Sample Information

**Sample Name:** Lemon Eucalyptus EO  
**Botanical Name:** Eucalyptus citriodora  
**Lot Number:** CHP19-PK  
**Production Method:** Steam distilled

**Sample Type:** EO - Single  
**Country of Origin:** China  
**Analysis Date:** 10/23/2024  
**Manufacture Date:** October 2024

## GC/MS

**Inst. ID:** Shimadzu GCMS-QP2010Ultra  
**Injection Type:** Split  
**Split Ratio:** 24.4

**Column Type:** ZB-5  
**Injection Volume:** 0.1 µL  
**Temperature Program:** 2C/min

## ANALYSIS

Optical Rotation @20°C  
 Refractive Index @20°C  
 Specific Gravity @20°C

## Physical Data

METHOD	RESULTS
USP[781]	0.00
USP[831]	1.45541
USP[841]	0.87204

Ret. Time	Component	Ret. Idx.	Conc. %
3.588	1-Methyl-3-cyclopentene	608	0.01%
3.733	Unidentified	623	0%
3.974	3-Methylbutanal	647	
8.782	Unidentified	858	0%
8.917	Unidentified	861	0.01%

GC/MS Report  
Components

8.978	Unidentified	863	0.01%	
10.976	Unidentified	911	0.02%	
11.644	alpha-Thuicic acid	924	0.02%	
12.044	alpha-Pinene	931	0.29%	
14.179	Sabinene	970	0.06%	
14.477	beta-Pinene	976	0.48%	
15.102	Myrcene	987	0.09%	
16.142	Unidentified	1005	0.01%	
16.468	Isoamyl isobutyrate	1010	0.02%	
16.674	2-Methylbutyl isobutyrate	1014	0.01%	
16.801	alpha-Terpinene	1016	0.01%	
17.284	para-Cymene	1023	0.03%	
17.575	Limonene	1027	0.14%	
17.685	beta-Phellandrene	1029	0.01%	
17.755	1,8-Cineole	1030	0.79%	
17.886	Dihydromyrcenol	1032	0.05%	
17.976	cis-beta-Ocimene	1034	0.04%	
18.648	trans-beta-Ocimene	1044	0.03%	
18.796	Unidentified	1046	0.02%	
19.074	Bergamal	1051	0.12%	
19.428	gamma-Terpinene	1056	0.11%	
20.273	Unidentified	1069	0.04%	
21.217	Terpinolene	1084	0.06%	
22.169	Linalool	1098	0.49%	
22.868	cis-Rose oxide	1109	0.04%	
23.262	Unidentified	1114	0.01%	
23.967	trans-Rose oxide	1125	0.02%	
24.091	Citronellol	1126	0.04%	IFRA
25.515	Isopulegol	1147	4.72%	
25.626	Unidentified	1149	0.07%	
25.938	Citronellal	1153	68.37%	IFRA
26.005	Unidentified	1154	0.08%	
26.238	Neoisopulegol	1158	3.3%	
26.667	Isomenthone	1164	0.02%	
26.944	Isoisopulegol	1168	0.24%	

GC/MS Report  
Components

Ret. Time	Component	Ret. Idx.	Conc. %	
27.077	Unidentified	1170	0.02%	
27.577	Neoisoisopulegol	1177	0.06%	
27.710	Terpinen-4-ol	1179	0.02%	
28.705	alpha-Terpineol	1193	0.09%	
29.893	trans-Pulegol	1211	0.03%	
30.683	Nerol	1223	0.02%	
30.862	Citronellol	1225	3.17%	IFRA
32.444	Geraniol	1248	0.03%	IFRA
32.808	Unidentified	1254	0.01%	
32.956	Methyl citronellate	1256	0.05%	
33.656	Geranial	1266	0.01%	IFRA
34.023	Unidentified	1272	0%	
36.259	Citronellic acid	1305	0.05%	
36.405	4-Vinyl guaicol	1307	0.06%	
36.722	Unidentified	1312	0.01%	
38.348	Citriodiol isomer	1337	0.6%	
39.085	Citronellyl acetate	1348	0.58%	IFRA
39.135	Eugenol	1349	0.1%	IFRA
39.796	Citriodiol isomer	1359	0.33%	
40.447	Unidentified	1369	0.01%	
40.951	Geranyl acetate	1376	0.01%	
41.665	beta-Elemene	1387	0.02%	
41.854	Unidentified	1390	0.08%	
42.347	Methyleugenol	1398	0.08%	IFRA
43.562	beta-Caryophyllene	1417	0.56%	
45.803	alpha-Humulene	1453	0.03%	
47.389	Germacrene D	1478	0.02%	
48.277	Bicyclogermacrene	1493	0.03%	
49.668	delta-Cadinene	1516	0.02%	
53.416	Caryophyllene oxide	1579	0.03%	
53.630	Unidentified	1583	0.01%	
63.396	Benzyl benzoate	1758	0.17%	IFRA
63.639	Benzyl benzoate	1763	0.18%	IFRA
66.734	Unidentified	1822	0.02%	
69.500	Unidentified	1876	0.27%	
69.779	Unidentified	1882	0.03%	
69.995	Unidentified	1886	0.31%	
70.080	Unidentified	1888	0.03%	
70.525	Unidentified	1896	0.04%	
71.923	Citriodiol acetal isomer	1925	4.77%	

Ret. Time	Component	Ret. Idx.	Conc. %
72.512	Citriodiol acetal isomer	1937	0.17%
73.248	Citriodiol acetal isomer	1952	0.08%
73.545	Unidentified	1958	0.02%
73.707	Unidentified	1962	0.04%
73.835	Unidentified	1964	0.02%
74.058	Unidentified	1969	0.56%
74.384	Citriodiol acetal isomer	1976	0.58%
74.426	Citriodiol acetal isomer	1977	0.62%
74.548	Citriodiol acetal isomer	1979	0.22%
74.626	Citriodiol acetal isomer	1981	0.22%
74.919	Citriodiol acetate isomer	1987	0.07%
75.296	Unidentified	1994	0.09%
75.526	Unidentified	1999	0.02%
77.001	Unidentified	2031	0.02%
77.222	Unidentified	2036	0.01%
78.005	Unidentified	2053	0.02%
78.254	Unidentified	2058	0.11%
78.363	Unidentified	2060	0.17%
78.530	Unidentified	2064	0.02%
78.702	Unidentified	2068	0.11%
79.105	Unidentified isomer I	2076	0.06%
79.208	Unidentified isomer I	2078	0.08%
79.343	Unidentified	2081	0.02%
79.534	Unidentified	2085	0.01%
80.213	Unidentified	2100	0.03%
80.926	Unidentified isomer I	2116	0.04%
81.069	Unidentified	2119	0.16%
81.125	Unidentified	2121	0.15%
97.222	Unidentified	2508	0.03%
100.114	Unidentified	2584	0.01%
100.639	Unidentified isomer II	2598	0.14%
100.785	Unidentified isomer II	2602	0.69%
100.914	Unidentified isomer II	2606	0.28%
101.091	Unidentified isomer II	2611	0.62%
101.150	Unidentified isomer II	2612	0.31%
101.635	Unidentified	2625	0.01%
101.768	Unidentified	2629	0.02%
103.885	Unidentified	2687	2.3%
105.946	Unidentified	2745	0.02%

Total Identified Compounds **92.76 %**

